

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Reissue of :  
Letters Patent 6,112,202 : Docket No. ARC919970008US2  
Jon Michael Kleinberg : Examiner:  
Serial No.: 08/813,749 : Group Art Unit:  
Filed: March 7, 1997 :  
For: METHOD AND SYSTEM FOR :  
IDENTIFYING AUTHORITATIVE :  
INFORMATION RESOURCES... :  
:

Commissioner for Patents  
Washington, D.C. 20231

**PRELIMINARY AMENDMENT**

SIR:

Please amend the following claims:

1. (Amended) A computer program product, for use with a computer system, for directing the computer system to execute a search of information resources, the resources having content-based links between each other, to identify a desired subset of the information resources which satisfy a desired criterion, the computer program product comprising:
  - a computer-readable medium;
  - means, provided on the recording medium, for directing the computer system to identify an initial set of information resources;
  - means, provided on the recording medium, for directing the computer system to define initial authoritativeness information for the initial set;

means, provided on the recording medium, for directing the computer system to use the initial authoritativeness information as input authoritativeness information, to execute the step[s] of:

- (i) producing first authoritativeness information about a set of information resources pointed to by links in resources of the input set, and
- (ii) producing second authoritativeness information about a set of information resources having links that point to resources of the input set] of producing at least one set of authoritativeness information based on links related to resources of the input set; and means, provided on the recording medium, for directing the computer system to produce a final set of information resources based on the [first and second] at least one set of authoritativeness information.

2. (Amended) A computer program product as recited in [claim 1] claims 1 or 58 or 59 or 60, wherein the information resources include World Wide Web pages, and the content-based links include hyper-links.

3. (Amended) A computer program product as recited in [claim 1] claims 1 or 58 or 59 or 60, wherein the means for directing to identify an initial set of information resources includes means, provided on the recording medium, for directing the computer system to obtain, as an input, an information resource containing subject matter of interest.

5. (Amended) A computer program product as recited in claim [1] 58, wherein:  
the [means for directing to execute the] steps of producing first and second authoritativeness information [is] are operative in a series of iterations;  
the initial authoritativeness information is used as input authoritativeness information for a first iteration;  
and the produced first and second authoritativeness information is a result of the iteration, the first and second authoritativeness information produced in a given iteration to be used as the input authoritativeness information for the next iteration.

6. (Amended) A computer program product as recited in claim [1] 56 further comprising means, provided on the recording medium, for directing the computer system to execute the steps of producing first authoritativeness information and producing second authoritativeness information in a series of iterations until a predetermined condition is met.

17. (Amended) A computer program product as recited in [claim 1] claims 1 or 58 or 59 or 60, wherein the means for directing to produce a final set of information resources includes means, provided on the recording medium, for directing the computer system to select information resources from the set based on their hub and authority values.

20. (Amended) A method for executing a search of information resources, the resources having content-based links between each other, to identify a desired subset of the information resources which satisfy a desired criterion, the method comprising the steps of:

identifying an initial set of information resources;  
defining initial authoritativeness information for the initial set;  
using the initial authoritativeness information as input authoritativeness information,  
[executing the steps of:  
    (i) producing first authoritativeness information about a set of information  
        resources pointed to by links in resources of the input set, and  
    (ii) producing second authoritativeness information about a set of information  
        resources having links that point to resources of the input set] producing at least one set of authoritativeness information based on links related to resources of the input set; and  
producing a final set of information resources based on the [first and second] at least one set of authoritativeness information.

21. (Amended) A method as recited in [claim 20] claims 20 or 61 or 62 or 63, wherein the information resources include World Wide Web pages, and the content-based links include hyperlinks.

22. (Amended) A method as recited in [claim 20] claims 20 or 61 or 62 or 63, wherein the step of identifying an initial set of information resources includes obtaining, as an input, an information resource containing subject matter of interest.

24. (Amended) A method as recited in claim [20] 61, wherein:

the [step of executing the steps of] steps of producing first and second authoritativeness information [is] are executed in a series of iterations;

the initial authoritativeness information is used as input authoritativeness information for a first iteration; and

the produced first and second authoritativeness information is a result of the iteration, the first and second authoritativeness information produced in a given iteration to be used as the input authoritativeness information for the next iteration.

25. (Amended) A method as recited in claim [20] 61, wherein the steps of producing first authoritativeness information and producing second authoritativeness information are executed in a series of iterations until a predetermined condition is met.

36. (Amended) A method as recited in [claim 20] claims 20 or 61 or 62 or 63, wherein:

each information resource is associated with an authority value and a hub value; and

the step of producing a final set of information resources includes selecting information resources from the set based on the hub and authority values.

39. (Amended) A system for executing a search of information resources, the resources having content-based links between each other, to identify a desired subset of the information resources which satisfy a desired criterion, the system comprising:

means for identifying an initial set of information resources;

means for defining initial authoritativeness information for the initial set;

means for using the initial authoritativeness information as input authoritativeness information, to execute the step[s] of:

(i) producing first authoritativeness information about a set of information resources pointed to by links in resources of the input set, and

(ii) producing second authoritativeness information about a set of information resources having links that point to resources of the input set] of producing at least one set of authoritativeness information based on links related to resources of the input set; and means for producing a final set of information resources based on the [first and second] at least one set of authoritativeness information.

40. (Amended) A system as recited in [claim 39] claims 39 or 64 or 65 or 66, wherein the information resources include World Wide Web pages, and the content-based links include hyperlinks.

41. (Amended) A system as recited in [claim 39] claims 39 or 64 or 65 or 66, wherein the means for identifying an initial set of information resources includes means for obtaining, as an input, an information resource containing subject matter of interest.

43. (Amended) A system as recited in claim [39] 64, wherein:

the [means for executing the] steps of producing first and second authoritativeness information [is] are operative in a series of iterations; the initial authoritativeness information is used as input authoritativeness information for a first iteration; and the produced first and second authoritativeness information is a result of the iteration, the first and second authoritativeness information produced in a given iteration to be used as the input authoritativeness information for the next iteration.

44. (Amended) A system as recited in claim [39] 64 further comprising [means for] executing the steps of producing first authoritativeness information and producing second authoritativeness information in a series of iterations until a predetermined condition is met.

55. (Amended) A system as recited in [claim 39] claims 39 or 64 or 65 or 66, wherein the means for producing a final set of information resources includes means for selecting information resources from the set based on their hub and authority values.

Please add the following claims:

58. (New) A computer program product as recited in claim 1 wherein the step of producing at least one set of authoritativeness information based on links related to resources of the input set, includes:

- (i) producing first authoritativeness information about a set of information resources pointed to by links in resources of the input set, and
- (ii) producing second authoritativeness information about a set of information resources having links that point to resources of the input set.

59. (New) A computer program product as recited in claim 1 wherein the step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the step of producing authoritativeness information about a set of information resources pointed to by links in resources of the input set.

60. (New) A method as recited in claim 1 wherein the step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the step of producing authoritativeness information about a set of information resources having links that point to resources of the input set.

61. (New) A method as recited in claim 20 wherein the step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the steps of:

- (i) producing first authoritativeness information about a set of information resources pointed to by links in resources of the input set, and

(ii) producing second authoritativeness information about a set of information resources having links that point to resources of the input set.

62. (New) A method as recited in claim 20 wherein the step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the step of producing authoritativeness information about a set of information resources pointed to by links in resources of the input set.

63. (New) A method as recited in claim 20 wherein the step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the step of producing authoritativeness information about a set of information resources having links that point to resources of the input set.

64. (New) A system as recited in claim 39 wherein said step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the steps of:

(i) producing first authoritativeness information about a set of information resources pointed to by links in resources of the input set, and  
(ii) producing second authoritativeness information about a set of information resources having links that point to resources of the input set.

65. (New) A system as recited in claim 39 wherein said step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the step of producing authoritativeness information about a set of information resources pointed to by links in resources of the input set.

66. (New) A system as recited in claim 39 wherein said step of producing at least one set of authoritativeness information based on links related to resources of the input set includes the step of producing authoritativeness information about a set of information resources having links that point to resources of the input set.

**COMMENTS**

Claims 1-3, 5, 6, 17, 20-22, 24, 25, 36, 39-41, 43, 44 and 55 have been amended.  
New claims 58 through 66 have been added. Claims 1 through 66 are active in the application. Claims 1, 20 and 39 are independent claims.

This Amendment is submitted to correct the errors set out in the accompanying REISSUE DECLARATION OF ASSIGNEE. No new matter has been added.

Applicant respectfully requests entry and consideration of this Amendment.

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by



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